

Claims

1. System (1) comprising an automotive fuse (5) for interrupting at least one circuit in overload and at least one analog/digital converter (6) for detecting and converting an analog measured value which is supplied at the input (7) of the analog/digital converter (6) into a digital measured value which is made available for further processing at the output (8) of the analog/digital converter (6), **characterized in that** the input (7) of the analog/digital converter (6) is connected directly to the automotive fuse (5), the automotive fuse (5) producing the analog measured value for the analog/digital converter (6), and the analog/digital converter (6) being located in the immediate vicinity of the automotive fuse (5) in order to digitize the measured value directly after its detection.
2. The system (1) comprising an automotive fuse (5) and an analog/digital converter (6) as claimed in claim 1, **wherein** the automotive fuse (5) and the A/D converter (6) are located in a common housing (16).
3. The system (1) comprising an automotive fuse (5) and an analog/digital converter (6) as claimed in claim 1, **wherein** a processor (9) is connected to the output (8) of the analog/digital converter (6) on which the digitized measured value is present.
4. The system (1) comprising an automotive fuse (5) and an analog/digital converter (6) as claimed in claim 2, **wherein** there is also a processor (9) in the common housing (16) of the automotive fuse (5) and the analog/digital converter (6).

5. The system (1) comprising an automotive fuse (5) and an analog/digital converter (6) as claimed in claim 1 or 3, **wherein** there is a temperature sensor (10) in the vicinity of the automotive fuse (5).
6. The system (1) comprising an automotive fuse (5) and an analog/digital converter (6) as claimed in claim 2 or 4, **wherein** there is a temperature sensor (10) in the common housing (16) of the automotive fuse (5) and the analog/digital converter (6).
7. The system (1) comprising an automotive fuse (5) and an analog/digital converter (6) as claimed in claim 5 or 6, **wherein** the temperature sensor (10) is connected to the processor (9) in order to carry out temperature compensation on the measured value.
8. Use for a system (1) as claimed in claim 1, **wherein** the system (1) is used as a digital transducer for a data bus system.